What is claimed is:

1. An equalizer for a single-carrier receiver, comprising:

a filter unit comprising filters which filter received multi-path signals;

a field synch extractor which extracts a field synch signal having two signals of different levels from the received signals;

a field synch storage unit which stores a kth field synch signal of the extracted field synch signal, wherein k is a natural number; and

an error calculator which N times repeatedly uses the kth field synch signal and calculates equalization error values, wherein the filter unit uses the equalization error values to update coefficients of the filters.

2. The equalizer as claimed in claim 1, wherein:

the error calculator comprises a first recycle mode which M times repeatedly uses the kth field synch signal to calculate the equalization error values, wherein M is a natural number less than N, and

the first recycle mode calculates the equalization error values in training and blind modes with respect to one of the two signals of the kth field synch signal.

3. The equalizer as claimed in claim 2, wherein:

the error calculator comprises a second recycle mode which (N-M) times repeatedly uses the kth field synch signal to calculate the equalization error values, and

the second recycle mode calculates the equalization error values in the training and blind modes with respect to one of the two signals except for a part including pre-ghost and post-ghost of the other of the two signals.

4. The equalizer as claimed in claim 3, wherein the equalization error values become '0' with respect to the one of the two signals.

5. The equalizer as claimed in claim 3, wherein the one of the two signals is a two-level signal, and the other of the two signals is an eight-level signal.

6. The equalizer as claimed in claim 2, wherein:

the equalizer further comprises a field synch generator which generates a reference signal; and

in a training mode, the error calculator further comprises a fourth adder which adds the kth field synch signal and the reference signal to calculate the equalization error values.

7. The equalizer as claimed in claim 2, wherein in a blind mode, the error calculator comprises

a decision unit which outputs the stored kth field synch signal as a predetermined level; and

a fifth adder which adds the kth field synch signal and the output signal of the predetermined level to calculate the equalization error value.

8. A method of equalizing a single-carrier receiver, comprising:

filtering received multi-path signals;

extracting a field synch signal having two signals of different levels from the received signals;

storing a kth field synch signal of the extracted field synch signal, wherein k is a natural number;

calculating equalization error values by N times repeatedly using the kth field synch signal;

updating coefficients of filters which filter the received multi-path signals using the equalization error values; and

filtering the multi-path signals using the filters having the updated coefficients.

9. The method as claimed in claim 8, wherein the calculating of the equalization error values further comprises:

M times repeatedly using the kth field synch signal to calculate the equalization error values, wherein M is a natural number less than N,, and

calculating of the equalization error values in training and blind modes with respect to one of the two signals.

10. The method as claimed in claim 9, wherein the calculating of the equalization error values further comprises:

(N-M) times repeatedly using the kth field synch signal to calculate the equalization error values, and

calculating the equalization error values in the training and blind modes with respect to one of the two signals except for a part including a pre-ghost and a post-ghost of the other of the two signals.

11. The equalization method as claimed in claim 10, wherein the equalization error values become '0' with respect to the one of the two signals.

12. The equalization method as claimed in claim 10, wherein the one of the two signals is a two-level signal, and the other of the two signals is a eight-level signal.

13. The equalization method as claimed in claim 9, wherein the calculating of the equalization error values in the training mode comprises:

generating a reference signal; and

adding the kth field synch signal and the reference signal to calculate the equalization error values.

14. The equalization method as claimed in claim 9, wherein the calculating of the equalization error values in the blind mode comprises:

outputting the input kth field synch signal as a predetermined level; and

adding the input kth field synch signal and the output signal of the predetermined level to calculate the equalization error value.